

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/057020 A1

(51) International Patent Classification⁷: **F15B 11/042**,
F16L 55/136, 55/132

[NO/NO]; Påskhusveien 24, N-4052 Røyneberg (NO).
ALEKSANDERSEN, Jostein [NO/NO]; Fjellprydveien
64, N-4070 Randaberg (NO).

(21) International Application Number:
PCT/NO2004/000384

(74) Agents: **ONSAGERS AS** et al.; P.O. Box 6963 St. Olavs
plass, N-0130 Oslo (NO).

(22) International Filing Date:
13 December 2004 (13.12.2004)

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20035587 15 December 2003 (15.12.2003) NO

(71) Applicant (for all designated States except US): **PLUG-
GING SPECIALISTS INTERNATIONAL ASA**
[NO/NO]; Fabrikkveien 15, N-4033 Stavanger (NO).

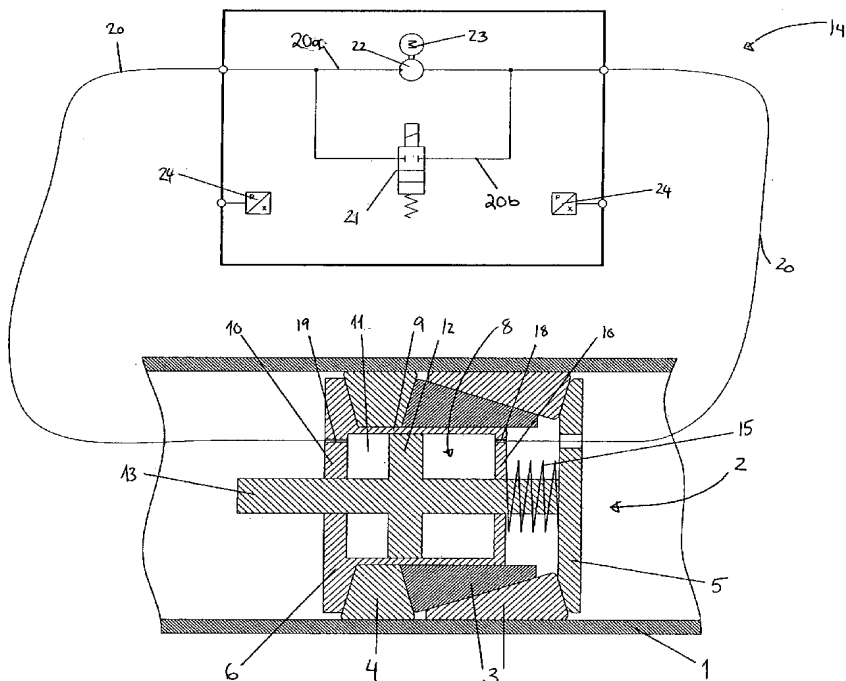
(72) Inventors; and

(75) Inventors/Applicants (for US only): **SYSE, Harald**

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: CONTROL SYSTEM FOR HYDRAULIC CYLINDER, PLUG WITH A HYDRAULIC CYLINDER AND METHODS
FOR SETTING AND RELEASING A PLUG



(57) Abstract: The invention regards a control system for a hydraulic cylinder comprising a cylinder chamber (8), a piston head (12) and a piston rod (13). The control system (14) comprises a fluid line (20) between at least on side of the hydraulic cylinder's piston head (12) and a source of hydraulic fluid, which fluid line (20) comprises at least in a part two parallel lines (20a, 20b) in which one of the lines (20a) there is arranged a pump (22). The other parallel line (20b) comprises a control element (21), which allows less fluid through the line (20b) in the opposite direction of the pump (22), than the pump in the other line (20a) when the pump is running. The invention also regards a plug comprising at least one hydraulic cylinder with a control system (14) and a method for setting and releasing the plug.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,*

SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.